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EXAMINER

MARSH, OLIVIA MARIE

ART UNIT

PAPER NUMBER

2686

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,661	PHANG ET AL.	
	Examiner	Art Unit	
	Olivia Marsh	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-2, 4-7, 11, and 14-15** are rejected under 35 U.S.C. 102(b) as being anticipated by Tsujita (U.S. 6,078,822).

Regarding **claim 1**, Tsujita discloses a dual purpose mobile station 402, reading on claimed "communication device," comprising a transmitter-receiver radio circuit 203 for executing communication protocol between the dual purpose mobile station control section and the home independent base station 401 or between the public base station 403 (column 12, lines 15-19), reading on claimed "communication device including a cordless telephone and a two way radio." Tsujita also discloses, in Figure 14, that during telephone call 404 between the home independent base station 401 and the dual purpose mobile station 402 (column 14, lines 63-64), reading on claimed "communicating within a cordless telephone call," when the public base station 403 transmits call signal (405) to the dual purpose mobile station, the home independent base station receives the call signal 405 in order to transmit the public incoming notification 406 to the dual purpose mobile station using accompanying control channel (column 14, lines 65-67; column 15, lines 1-2), reading on claimed "receiving an incoming two way radio communication." When the dual purpose mobile station receives the notification 406, it transmits a silent transmission requirement 407 to the home independent base station 401 in order to

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execute silent transmission, reading on claimed "low radio frequency mode," while temporarily stopping the telephone call 404 (column 15, lines 2-6). If the user's response namely hooking 413 is detected, the hold-requirement 418 is transmitted to the home independent base station 401 to hold the indoor self-supporting telephone call (column 15, lines 19-22), reading on claimed "placing the cordless telephone call in a hold mode, wherein the hold mode includes operating the cordless telephone in a low radio frequency mode." The dual purpose mobile station 402 shifts to the new telephone call 416, reading on claimed "two way radio communication," after being notified of the setting of the hold state 419 from the home independent base station 401 (column 15, lines 23-25), reading on claimed "establishing communication within the two way radio communication."

Regarding **claim 2**, Tsujita discloses everything as applied in claim 1 and further discloses, as previously stated, that during telephone call 404 between the home independent base station 401 and the dual purpose mobile station 402 when the public base station 403 transmits call signal (405) to the dual purpose mobile station, the home independent base station receives the call signal 405 in order to transmit the public incoming notification 406 to the dual purpose mobile station using accompanying control channel (column 14, lines 63-67; column 15, lines 1-2), reading on claimed "notifying a user of the two way radio communication in response to the receiving step."

Regarding **claim 4**, Tsujita discloses everything as applied in claim 2 and further discloses that when the public base station 403 transmits call signal 405 to the dual purpose mobile station during a telephone call 404 currently occurring between the home independent base station 401 and the dual purpose mobile station 402, the home independent base station 401 receives the call signal 405 and transmits the public reception notification 406 to the dual purpose mobile station using an accompanying control channel. There are two systems in the

accompanying control channel. One system is capable of transmitting control information without breaking voice communication, and another system is capable of transmitting control information with breaking voice communication. The present embodiment uses the system in which the control information is transmitted without breaking the voice communication [column 12, lines 57-67; column 13, lines 1-4], reading on claimed "maintaining a telephone link between the cordless telephone and a cordless telephone base station." The mobile station 402 transmits a silent transmission requirement to the home base station 401 (407) in order to cause the home independent base station 401 to perform silent transmission (column 13, lines 7-10), reading on claimed "operating the cordless telephone in a receive-only mode" and "maintaining a telephone link between the cordless telephone and a cordless base station."

Regarding **claim 5**, Tsujita discloses everything as applied in claims 1 and 4 and further discloses, as previously stated, when the dual purpose mobile station receives the notification 406, it transmits a silent transmission requirement 407 to the home independent base station 401 in order to execute silent transmission (column 15, lines 2-6). If the user's response namely hooking 413 is detected, the hold-requirement 418 is transmitted to the home independent base station 401 to hold the indoor self-supporting telephone call (column 15, lines 19-22), reading on claimed "instructing the cordless base station by the communication device to maintain the telephone link in a hold mode prior to the maintaining step."

Regarding **claim 6**, Tsujita discloses everything as applied in claims 1 and 4 and further discloses, as previously stated, the present invention uses the system in which the control information is transmitted without breaking the voice communication (column 13, lines 2-4). It is inherent that in order for the home base station 401 to maintain a telephone link between the dual purpose mobile station 402 that the control channel would send control information, or

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broadcast messages, in order to enable the dual purpose mobile station to later restart voice communications and retrieve the on hold call.

Regarding **claim 7**, Tsujita discloses everything as applied in claim 1 and further discloses that when the telephone call 416 is terminated, the disconnection processing 417 is executed. Further, in order to return to the indoor self-supporting telephone call again while removing the hold, the dual purpose mobile station 402 executes hold-removing recall out processing 420 to resume the indoor self-supporting telephone call (421) [column 15, lines 26-31], reading on claimed "receiving a user input to terminate the hold mode and resuming the cordless telephone call in response to the user input."

Regarding **claim 11**, Tsujita discloses a dual purpose mobile station 402, reading on claimed "communication device," comprising a transmitter-receiver radio circuit 203, reading on claimed "two way radio" and "cordless telephone," for executing communication protocol between the dual purpose mobile station control section and the home independent base station 401 or between the public base station 403 (column 12, lines 15-19). Tsujita also discloses, in Figure 14, that during telephone call 404, reading on claimed "active cordless telephone calls," between the home independent base station 401 and the dual purpose mobile station 402 (column 14, lines 63-64), reading on claimed "a cordless telephone for communicating within an active cordless telephone calls," when the public base station 403 transmits call signal (405) to the dual purpose mobile station, the home independent base station receives the call signal 405 in order to transmit the public incoming notification 406 to the dual purpose mobile station using accompanying control channel (column 14, lines 65-67; column 15, lines 1-2). When the dual purpose mobile station receives the notification 406, it transmits a silent transmission requirement 407 to the home independent base station 401 in order to execute silent transmission, reading on claimed "low radio frequency mode," while temporarily stopping the

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telephone call 404 (column 15, lines 2-6), reading on claimed "the cordless telephone is adapted to operate the active cordless telephone call in a low radio frequency mode when the two way radio is communicating within the active two way radio communication." If the user's response namely hooking 413 is detected, the hold-requirement 418 is transmitted to the home independent base station 401 to hold the indoor self-supporting telephone call (column 15, lines 19-22). The dual purpose mobile station 402 shifts to the new telephone call 416, reading on claimed "a two way radio for communicating with within an active two way radio communication with one or more two way radios," after being notified of the setting of the hold state 419 from the home independent base station 401 (column 15, lines 23-25).

Regarding **claim 14**, Tsujita discloses everything as applied in claim 11 and further discloses that when the public base station 403 transmits call signal 405 to the dual purpose mobile station during a telephone call 404 currently occurring between the home independent base station 401 and the dual purpose mobile station 402, the home independent base station 401 receives the call signal 405 and transmits the public reception notification 406 to the dual purpose mobile station using an accompanying control channel. There are two systems in the accompanying control channel. One system is capable of transmitting control information without breaking voice communication, and another system is capable of transmitting control information with breaking voice communication. The present embodiment uses the system in which the control information is transmitted without breaking the voice communication [column 12, lines 57-67; column 13, lines 1-4], reading on claimed "maintaining a telephone link between the cordless telephone and a cordless telephone base station." The mobile station 402 transmits a silent transmission requirement to the home base station 401 (407) in order to cause the home independent base station 401 to perform silent transmission (column 13, lines 7-10),

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reading on claimed "operating the cordless telephone in a receive-only mode" and "maintaining a telephone link between the cordless telephone and a cordless base station."

Regarding **claim 15**, Tsujita discloses everything as applied in claim 11 and further discloses, as previously stated, the present invention uses the system in which the control information is transmitted without breaking the voice communication (column 13, lines 2-4). It is inherent that in order for the home base station 401 to maintain a telephone link between the dual purpose mobile station 402 that the control channel would send control information, or broadcast messages, in order to enable the dual purpose mobile station to later restart voice communications and retrieve the on hold call.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujita as applied to claim 1 above, and further in view of Mauney, *et al.* (U.S. 2005/0032475 A1).

As to **claim 3**, Tsujita discloses everything as applied in claim 1; however, Tsujita fails to disclose querying the user for hold mode activation in response to the receiving step and entering a user input instruction by the user to enter the hold mode in response to the query.

In an analogous art, Mauney teaches if a call waiting request is detected at step S.885, then handset B will analyze the call waiting request information and, based on this analysis, query the user of handset B to notify the user that a call request has been received at step

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S.886. This query or notification may include the displaying of a message containing the ID of the handset that sent the call waiting request (e.g., the ID of handset A) and/or the generation of an appropriate tone to indicate that a call waiting request has been received, reading on claimed "querying the user for hold mode activation in response to the receiving step." Following step S.886, it is determined at step S.887 whether the user of handset B has decided to respond to the call waiting request. The user of handset B may respond to the call waiting request by pressing an appropriate key on the handset to signify the acceptance of the call waiting request and to indicate that handset C should be placed on hold, reading on claimed "entering a user input instruction by the user to enter the hold mode in response to the query." [Page 42, paragraph 384]

Therefore, It would have been obvious to one of ordinary skill in the art at the time of invention to require the method, discloses by Tsujita, to further require the steps of querying the user for hold mode activation in response to the receiving step and entering a user input instruction by the user to enter the hold mode in response to the query, as taught by Mauney, to enable the user to possess the ability to either place the current active call on hold, disconnect the active call, or send the active call to voice mail.

5. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujita as applied to claim 1 above, and in view of Amin *et al* (U.S. 5,995,830) and in further view of Nojima *et al*. (U.S. 5,832,386).

As to **claim 8**, Tsujita discloses everything as applied in claim 1; however, he fails to disclose traveling out of range of a cordless base station used for the cordless telephone call; receiving an input to exit the hold mode; and notifying the user of the out of range situation.

In an analogous art, Amin teaches a method, in Figure 2, wherein step 202 the MSC 110 detects a dropped call. MSC 110 is able to detect when a communication channel between a BS and a mobile telephone has been dropped and in step 204 the MSC 110 determines the cause of the dropped call (column 4, lines 17-23). In step 206, the MSC 110 sends a status message to telephone 102. It is noted that although the wireless communication channel 118 between the BS 114 and mobile telephone 116 has been dropped, there is still a connection between telephone 102 and MSC 110 via CO 104, IXC 106, and communication link 124. MSC 110 keeps this connection established even though it has detected the dropped communication channel 118. [Column 4, lines 45-52] In the case where the mobile telephone 116 travels outside the coverage area of the wireless network 122, reading on claimed "traveling out of range of a cordless base station used for the cordless telephone call," there is a poor chance that the mobile telephone 116 will re-enter the coverage area within a short time frame, so the system will not try to re-establish communication in this case (column 5, lines 19-23). If it is determined in step 208 that reconnection to the mobile telephone 116 is not appropriate, then in step 218 the MSC 110 routes the call from telephone 102 to a voice mail node 108 (column 5, lines 47-50), reading on claimed "receiving an input to exit the hold mode."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method, discloses by Tsujita, to include the steps of traveling out of range of a cordless base station used for the cordless telephone call and receiving an input to exit the hold mode, as taught by Amin, in order to discontinue holding a call in which a mobile user would be unable to retrieve once it has left the serving area of the base station holding the call for the mobile user.

Tsujita discloses everything as applied in claim 1 and Amin teaches everything as stated above; however, neither teach notifying the user of the out range situation.

In an analogous art, Nojima teaches if the portable telephone set is out of the service area of the public radio base station (if it can no longer receive control signals from the public radio base station through the established public control channel), a message "OUT-OF PUBLIC SERVICE AREA" is displayed on the LCD 22 to inform the user that he or she cannot call or be called via the public radio base station (column 8, lines 50-56), reading on claimed "notifying the user of the out of range situation."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method, discloses by Tsujita, to include the steps of traveling out of range of a cordless base station used for the cordless telephone call and receiving an input to exit the hold mode, as taught by Amin, and notifying the user of the out or range situation, as taught by Nojima, in order to notify the mobile user of why the user cannot retrieve a call placed on hold once the user has roamed out of the base station serving the held call.

6. **Claims 9-10 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujita as applied to claims 1 and 11 above, and further in view of Saegusa *et al.* (U.S. 4,876,708).

As to **claim 9**, Tsujita discloses everything as applied in claim 1; however, he fails to disclose the steps of setting a timer and resuming the cordless telephone call when a time frame equals the timer.

In an analogous art, Saegusa teaches a cordless telephone system and a hold control system in a cordless telephone system having a hold function (column 1, lines 5-7). The radio telephone set 1 comprises a connector 2 which comprises a switching unit 21 and a control unit 23 (Figure 4; column 3, lines 45-48) and the switching unit 21 switches a subscriber telephone line 4 in the talk or hold mode under the control of the control unit 23 (column 3, lines 59-61). At

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the same time, the control unit 23 performs hold control by using a timer 28, reading on claimed "setting a timer." The control unit 23 sets the communication channel in the self hold state without disconnecting the radio channel 3 in response to the hold signal received after the communication channel is connected with the radio telephone set 1. However, when the first radio signal received within the predetermined period of time is an on-hook signal, or when the signal is not received within the predetermined period of time, the control unit 23 controls the radio transmitting/receiving unit 26 to disengage the radio channel from the radio telephone set 1. In other words, the control unit 23 causes the radio transmitting/receiving unit 26 to stop transmitting the electric wave and set the communication channel in the complete hold state, reading on claimed "resuming the cordless telephone call when a time frame equals the timer." [Column 4, lines 31-40]

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method, disclosed by Tsujita, to further comprise the steps of setting a timer and resuming the cordless telephone call when a time frame equals the timer, as taught by Saegusa, to enable the mobile user to place a call on hold for a specified period of time and if the user does not respond within that time period the call will not be disconnected.

As to **claim 10**, Tsujita discloses everything as applied in claim 1 and Saegusa teaches everything as applied in claim 9; however, Tsujita fails to disclose resetting the timer in response to the resuming step and operating the cordless telephone call within the hold mode.

Saegusa further teaches by using the timer 28, the control unit 23 monitors the presence/absence of a radio signal received within a predetermined period of time after the complete hold state is initiated (column 4, lines 40-44), reading on claimed "resetting the time in response to the resuming step and operating the cordless telephone call within the hold mode."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method, disclosed by Tsujita, the steps of setting a timer and resuming the cordless telephone call when a time frame equals the timer, taught by Saegusa, to further comprise the steps of resetting the timer in response to the resuming step and operating the cordless telephone call within the hold mode, also taught by Saegusa, to enable the mobile user to place a call on hold for a specified period of time and if the user does not respond within that time period the call may continue to be placed on hold.

As to **claim 16**, Tsujita discloses everything as applied in claim 11; however, he fails to disclose the cordless telephone includes a timer for establishing a time frame for the low radio frequency mode operation.

In an analogous art, Saegusa teaches a cordless telephone system and a hold control system in a cordless telephone system having a hold function (column 1, lines 5-7). The radio telephone set 1 comprises a connector 2 which comprises a switching unit 21 and a control unit 23 (Figure 4; column 3, lines 45-48) and the switching unit 21 switches a subscriber telephone line 4 in the talk or hold mode under the control of the control unit 23 (column 3, lines 59-61). At the same time, the control unit 23 performs hold control, reading on claimed "low radio frequency mode," by using a timer 28, reading on claimed "timer for establishing a time frame." The control unit 23 sets the communication channel in the self hold state without disconnecting the radio channel 3 in response to the hold signal received after the communication channel is connected with the radio telephone set 1. However, when the first radio signal received within the predetermined period of time is an on-hook signal, or when the signal is not received within the predetermined period of time, the control unit 23 controls the radio transmitting/receiving unit 26 to disengage the radio channel from the radio telephone set 1. In other words, the control unit 23 causes the radio transmitting/receiving unit 26 to stop transmitting the electric wave and

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set the communication channel in the complete hold state, reading on claimed "low radio frequency mode operation." [Column 4, lines 31-40]

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the device, disclosed by Tsujita, to further comprise a timer for establishing a time frame for the low radio frequency mode operation, as taught by Saegusa, to enable the mobile user to place a call on hold for a specified period of time and if the user does not respond within that time period the call will not be disconnected.

7. **Claims 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujita as applied to claim 11 above, and further in view of well known prior art (MPEP 2144.03).

As to **claim 12**, Tsujita discloses everything as applied in claim 11 and discloses a transmitter-receiver circuit 203 for executing communication protocol between the dual purpose mobile station control section and the home independent base station 401 or between the public base station 403, reading on claimed "the two way radio is operatively coupled to the cordless telephone;" however, he does not disclose the two way radio is adapted to notify the cordless telephone of the active two way radio communication.

The Examiner takes Official Notice that it was old and well known in the art to enable two different transceivers within a communication device that transmit/receive differing radio communication protocols to communicate with one another in order operate in a manner that would not cause interference between the two transceivers.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the two way radio, disclosed by Tsujita, to notify the cordless telephone of the active two way radio communication, as taught by well known prior art, to prevent interference from occurring between the differing transceivers.

As to **claim 13**, Tsujita discloses everything as applied in claim 11, well known prior art teaches everything as applied in claim 12, and Tsujita further discloses if the dual purpose mobile station 402 does not receive 344 the disconnection signal from the home independent base station 401, but detects hold manipulation by the user, reading on claimed "user input," and if the indoor self-supporting telephone call is not on hold 347, the processing 350 is executed that causes the indoor self-supporting telephone call to be put on hold. Silent transmission is begun 351, before ringing a hold-melody in order to notify the hold state to the user 352, reading on claimed "a user input for activating the low radio frequency mode of the cordless telephone in response to the active two way radio communication." [column 15, lines 66-67; column 16, lines 1-2; 6-10]

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the two way radio, disclosed by Tsujita, to notify the cordless telephone of the active two way radio communication, as taught by well known prior art, and to detect a user input for activating the low radio frequency mode of the cordless telephone in response to the active two way radio communication, as taught by Tsujita, to enable the mobile device to determine whether the user would like to place the active call on hold or to disconnect the call.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. 5,666,364, U.S. 6,794,845.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olivia Marsh whose telephone number is 703-308-4563. The examiner can normally be reached on 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703-305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CHARLES APPIAH
PRIMARY EXAMINER